

We Claim:

1. A configuration, comprising:

a first device;

a cross bar;

a second device connected to said first device through said cross bar, said first device accessing said second device through said cross bar to at least one of read data from said second device and write data to said second device;

upon the occurrence of a read access to said second device, said first device reading the data emitted from said second device upon receipt of a ready signal produced by said second device and supplied to said first device through said cross bar; and

upon the occurrence of a write access from said first device to said second device:

said first device emitting the data to be written to said second device upon receipt by said first device of a ready signal produced by said second device and supplied to said first device through said cross bar; and

said second device reading the data emitted from said first device upon receipt by said second device of a data valid signal produced by said first device and supplied to said second device through said cross bar.

2. The configuration according to claim 1, further comprising:

a first address bus;

a second address bus;

a first read data bus;

a second read data bus;

a first write data bus;

a second write data bus;

said first device and said cross bar being connected to one another through said first address bus, said first read data bus, and said first write data bus; and

said second device and said cross bar being connected to one another through said second address bus, said second read data bus, and said second write data bus.

3. The configuration according to claim 2, wherein said first device sends a request signal to said cross bar when said first device wishes to make a read access to said second device.

4. The configuration according to claim 3, wherein said first device sends an address to said cross bar at the same time as the request signal, said address specifying a device and a point within said device from which data should be read.

5. The configuration according to claim 3, wherein:

said second device is a plurality of second devices; and

said first device sends an address to said cross bar at the same time as the request signal, said address specifying one of said second devices and a point within said one second device from which data should be read.

6. The configuration according to claim 4, wherein said first device transmits the request signal and the address to said cross bar through said first address bus.

7. The configuration according to claim 3, wherein said cross bar confirms the read access request by transmission of a grant signal to said first device.

8. The configuration according to claim 7, wherein said cross bar transmits the grant signal to said first device through said first address bus.

9. The configuration according to claim 4, wherein said cross bar passes on at least a portion of the address supplied to said cross bar through said second address bus to said device from which data should be read.

10. The configuration according to claim 9, wherein said second device emits to said cross bar the data stored at the address supplied to said second device.

11. The configuration according to claim 10, wherein said second device emits the ready signal to said cross bar at the same time that said second device emits the data that has been read.

12. The configuration according to claim 11, wherein said second device transmits the data that has been read and the

ready signal to said cross bar through said second read data bus.

13. The configuration according to claim 12, wherein said cross bar passes on the data supplied thereto and the ready signal supplied thereto through said first read data bus to said first device.

14. The configuration according to claim 2, wherein said first device sends a request signal to said cross bar when said first device wishes to make a write access to said second device.

15. The configuration according to claim 14, wherein said first device sends an address to said cross bar at the same time as the request signal, the address specifying a device and a point within said device to which data should be written.

16. The configuration according to claim 15, wherein said first device transmits the request signal and the address to said cross bar through said first address bus.

17. The configuration according to claim 14, wherein said cross bar confirms the write access request from said first device by transmitting a grant signal to said first device.

18. The configuration according to claim 17, wherein said cross bar transmits the grant signal to said first device through said first address bus.

19. The configuration according to claim 15, wherein said cross bar passes on at least a portion of the address supplied to said cross bar through said second address bus to said device to which data should be written.

20. The configuration according to claim 19, wherein said second device emits a ready signal to said cross bar when said second device is ready to receive the data to be stored in said second device.

21. The configuration according to claim 20, wherein said second device transmits the ready signal to said cross bar through said second read data bus.

22. The configuration according to claim 21, wherein said cross bar passes on the ready signal to said first device through said first read data bus.

23. The configuration according to claim 22, wherein said first device emits to said cross bar the data to be written to said second device.

24. The configuration according to claim 23, wherein said first device emits the data valid signal to said cross bar at the same time that said first device emits the data to be written to said second device.

25. The configuration according to claim 24, wherein said first write data bus transmits the data emitted from said first device and the data valid signal emitted from said first device to said cross bar.

26. The configuration according to claim 25, wherein said cross bar passes on the data and the data valid signal supplied to said cross bar to said second device through said second write data bus.

27. A method for at least one of reading and writing data, which comprises:

connecting a second device to a first device through a cross bar;

accessing the second device with the first device through the cross bar for at least one of reading and writing data;

when a read access to the second device occurs, reading the data emitted from the second device with the first device when the first device receives a ready signal produced by the second device and supplied to the first device through the cross bar; and

when a write access from the first device to the second device occurs:

emitting, from the first device, the data to be written to the second device when the first device receives a ready signal produced by the second device and supplied to the first device through the cross bar; and

reading the data emitted from the first device with the second device when the second device receives a data valid signal produced by the first device and supplied to the second device through the cross bar.

28. A configuration, comprising:

a first means for reading and writing;

a cross bar;

a second means for reading and writing connected to said first read/write means through said cross bar, said first read/write means accessing said second read/write means through said cross bar to at least one of read data from said second read/write means and write data to said second read/write means;

upon the occurrence of a read access to said second read/write means, said first read/write means reading the data emitted from said second read/write means upon receipt of a ready signal produced by said second read/write means and supplied to said first read/write means through said cross bar; and

upon the occurrence of a write access from said first read/write means to said second read/write means:

said first read/write means emitting the data to be written to said second read/write means upon receipt by said first read/write means of a ready signal produced by said second read/write means and supplied to said first read/write means through said cross bar; and

said second read/write means reading the data emitted from said first read/write means upon receipt by said second read/write means of a data valid signal produced

by said first read/write means and supplied to said
second read/write means through said cross bar.